Bulletin #5

This issue was released on October 15, 1997.

Contents

Preliminary Alquist-Priolo Earthquake Fault Zones Maps Released

Two new and one revised Alquist-Priolo Earthquake Fault Zones Act maps will be released on November 1, 1997 to the affected city and counties. The map release initiates a 90-day review period during which affected agencies, geologists, and the public may comment on the maps.

These preliminary review fault zone maps, covering the Shelter Cove, Santa Paula, and Camarillo quadrangles, were compiled by the Department of Conservation's Division of Mines and Geology. They include part of the San Andreas Fault in Humboldt County and branches of the Simi-Santa Rosa Fault Zone in Ventura County (see index map). These maps affect portions of Humboldt and Ventura counties and the city of Camarillo.

Earthquake fault zones are regulatory envelopes drawn around active faults. They are shown on U.S. Geological Survey topographic maps at a scale of 1 inch equals 2,000 feet. These zones define areas of future hazard of surface fault rupture.

These preliminary review maps are the first earthquake fault zone maps to be digitally generated. Eventually the 539 existing official earthquake fault zone maps will be converted to digital format. The digital format will allow users to import the data for use with geographic information systems or other databases.

When the maps become official in May 1998, they will be used by the affected city and counties, as well as state agencies, in planning and controlling new construction. A geologic investigation and written report are required for projects within earthquake fault zones. The investigation determines whether the potential for fault rupture poses a hazard to the proposed structure. If an active fault is found, a building setback zone must be established.

The State Mining and Geology Board will hold at least one public hearing on the proposed zone maps during the 90-day review period. The Board expects to gather geologic information through the public comment process that may have a bearing on the proposed map(s). At the end of the review period, February 1, 1998, revisions to the earthquake fault zone maps will be made where warranted.

The release is the first since the State Mining and Geology Board adopted a requirement that local lead agencies notify property owners who may be affected by proposed earthquake fault zones (California Code of Regulations, Title 14, Division 2, Section 3602).

The new requirement specifies that cities and counties must provide notice to property owners within 45 days from the issuance of proposed new or revised preliminary earthquake fault zone map(s) and announce the 90-day public comment period.

Comments on the proposed earthquake fault zone maps should be sent to:

State Mining and Geology Board
801 K Street, MS 24-05
Sacramento, CA 95814

Copies of the maps will be available for examination at the planning or building departments of the affected city and counties and at offices of the Division of Mines and Geology at:

107 S. Broadway, Room 1065

Los Angeles, CA 90012-4402
(213) 620-3560

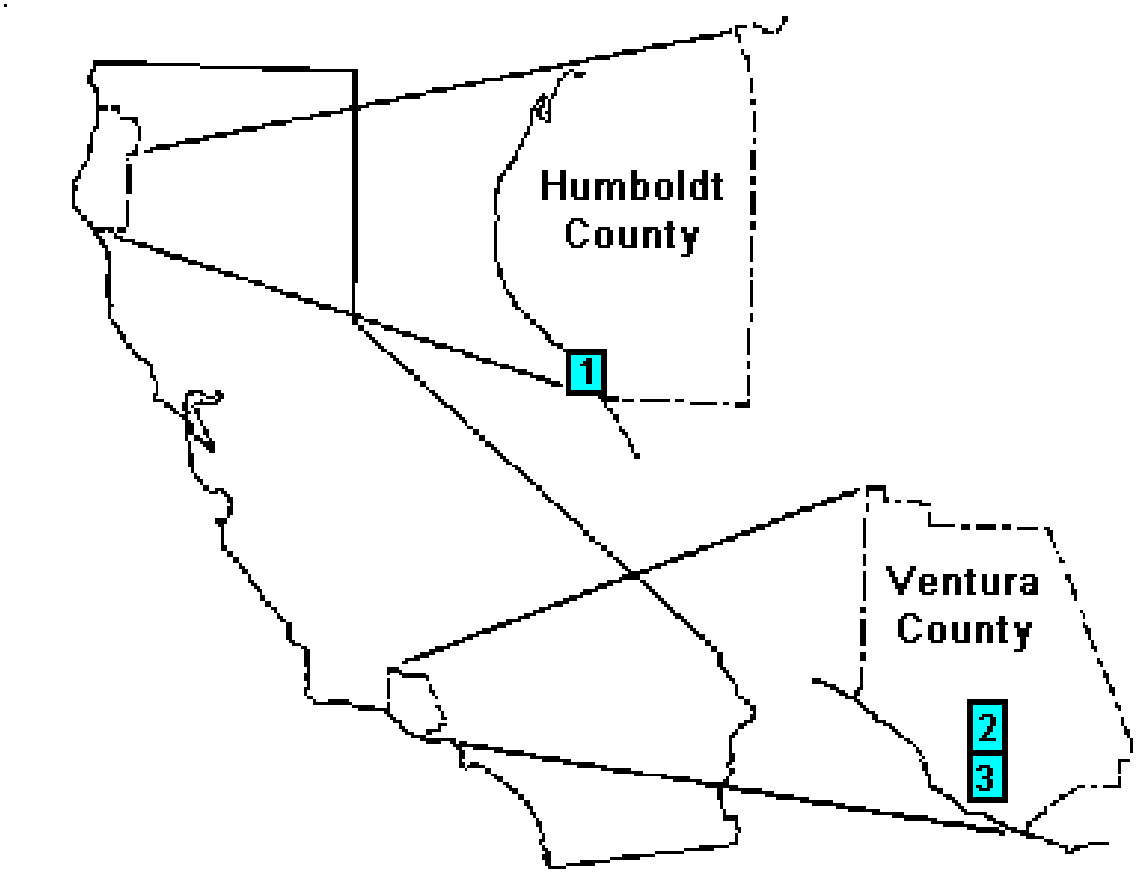
185 Berry Street, Room 210
San Francisco, CA 94107-1728
(415) 904-7707

801 K Street, Room 1400
Sacramento, CA 95814-3532
(916) 445-5716

Copies may be purchased for the cost of reproduction and handling from:

BPS Reprographic Services
149 Second Street
San Francisco, CA 94105
(415) 512-6550

INDEX MAP
PRELIMINARY ALQUIST-PRIOLO MAPS



Preliminary review maps issued November 1, 1997 (map numbers keyed to index map):

***1. Shelter Cove**
2. Santa Paula
3. Camarillo

*****Revised zone map

City and counties affected by proposed new or revised Earthquake Fault Zones shown on Preliminary Review Maps of November 1, 1997:

City	**Counties**

Camarillo Humboldt
Ventura

Seismic Trivia

Approximately 200 faults with evidence of Holocene activity have been zoned under the Alquist-Priolo Earthquake Fault Zoning Act. The Holocene period covers the last 11,000 years—the time since the last ice age.

More Preliminary Seismic Hazard Zone Maps Released

Five new preliminary and two revised seismic hazard zone maps covering parts of Los Angeles and Orange counties were released by the Department of Conservation on October 15, 1997. Each of the maps covers approximately 60 square miles at a scale of 1 inch equals 2,000 feet.

The new preliminary maps cover the La Habra, Laguna Beach, Orange, Tustin, and Yorba Linda quadrangles. The Anaheim and Newport Beach quadrangle maps, released as official maps in April 1997, have been revised. The Newport Beach map reflects new landslide information while on the Anaheim map liquefaction zones have been modified to accommodate new subsurface information.

Following a six-month technical review and revision period, the maps will be released as official Seismic Hazard Mapping Act zone maps on April 1, 1998. Twenty-one cities in Los Angeles and Orange counties are affected by the latest maps. These are: Anaheim, Brea, Buena Park, City of Industry, Costa Mesa, Diamond Bar, Fullerton, Irvine, Laguna Beach, La Habra, La Habra Heights, La Mirada, Los Angeles, Newport Beach, Orange, Placentia, Santa Ana, Tustin, Villa Park, Whittier, and Yorba Linda.

The release follows the August 1 release of five preliminary seismic hazard zone maps covering portions of Los Angeles and Ventura counties. These maps, the Canoga Park, Calabasas, Newhall, Oat Mountain, and Van Nuys quadrangles, are presently undergoing technical review through November 1.

Local governments and other interested parties have until January 2, 1998 to review and comment on the newest maps. Comments must be submitted to the State Mining and Geology Board by that date. The address is:

State Mining and Geology Board
801 K Street, Room 24-05
Sacramento, CA 95814

Special Publication 42 Revised

The 10th revision of Special Publication 42, ***Fault-Rupture Hazard Zones in California,*** is scheduled for release in late 1997. This Department of Conservation publication explains the provisions of the Alquist-Priolo Act and contains a statewide index map showing the location of the 539 official fault zone maps.

Special Publication 42 is available for $5.00 per copy, including tax and postage, from:

Division of Mines and Geology
P.O. Box 2980
Sacramento, CA 95812-2980
(916) 445-5716

San Francisco Converts Digital Seismic Hazard Zone Map Files From Internet

Following release of the first official seismic hazard zone maps in April, San Francisco's Department of Building Inspection set about applying the requirements of the Seismic Hazard Mapping Act.

Immediately, a public demand for information revealed a need for refinement of the city's geographic information system.

To address the public demand, George White of San Francisco's Department of Public Works' (DPW) Office of Capital Resource Management contacted the California Department of Conserva-tion's Division of Mines and Geology (DMG) to obtain digital files of its seismic hazard zones. Subsequently, DPW was the first agency to receive seismic hazard zone data on the Internet from DMG's FTP site.

White recalls the urgency:

"*We did this job in two weeks when it really should take about a month. We weren't really budgeted for it, but the Department of Building Inspection (DBI) had an urgent need and we (DPW) did our best to accommodate their need.*

"Because of the urgency, the project got off to a hectic start. We were fortunate to quickly pull it together and established good communication with the stakeholders. This collaborative process turned the project into a great success.

"In the very short time frame in which we were working, DPW provided the DBI with a color map, a black and white map, and a list of parcels in the liquefaction zone indi-cated on the DMG map. DPW's goal was to provide DBI with the information it needed to meet the state mandate. Consequently, the information is now available to the public, including property owners and buyers and real estate agents as well as to architects, engineers and other planning agencies."

The staff at DMG worked closely with DPW staff in monitoring the conversion process. The DMG system is largely Intergraph MGE/MicroStation based. DPW uses ESRI's ARC/INFO.

Scott Shepherd, DMG's geographic information system liaison based in Los Angeles, explains the DMG role in the process:

"*Typically, products from the two systems don't automatically load into the other. Therefore, an exchange format is needed. We used Autocad's DXF drawing file.*

"Without careful planning and testing, various aspects of a file can change as it is exported to the DXF format from MicroStation and imported into a different GIS such as ARC/INFO. In this case, DXF turned MicroStation polygons into a mass of polymesh lines representing shapes. As a result, the San Francisco folks had to manually delete hundreds if not thousands of horizontal lines filling the polygons. We now know that we can avoid this problem by complexing MicroStation polygons into solid shapes before exporting to DXF.

"On the brighter side, we are happy to verify that the planimetric aspects of the data transferred to the San Francisco GIS in good order. They requested that the data be in State Plane Coordinate System Zone 3 using the NAD83 datum. Upon referencing it to their parcel base map they found it coincided precisely. As an extra measure, DMG staff in San Francisco visited their office to check that certain points crossed by lines on our design files also crossed those same points on their base map."

Jeffery Johnson of DPW also recounts his contribution:

"The initial conversion of the DXF file was done on a SUN SparcStation 20 using ESRI's ARC/INFO DXFARC com-mand to convert the DXF file to ARC/INFO coverage. In order to have a topo-logically correct coverage, ARC/INFO's ArcEdit module was used to close polygons. When a satisfactory coverage was produced, I used ESRI's ArcView to evaluate that coverage, select out the interior polygons and convert the selected polygons of the coverage to a shapefile for use in mapping.

"Using ArcView as my mapping software on the PC side, I set up themes to be used in the map—the liquefaction potential zones, the basemap lots, the basemap street centerlines, and the shore and county polygon for the part of the city covered by DMG's map. I used ArcView's spatial select feature to select those basemap lots which fell within the liquefaction potential zones and created a shapefile consisting of those lots.

"The layout was done in consultation with DBI's Zan Turner. Because of ArcView 2.1's labeling limitations, street name labeling took an inordinate amount of time. However, ArcView 3.0 has essentially resolved those limitations, allowing for greater ease of labeling.

"The principal technical considerations concerned the legibility of the map. It was important that the colors and line weights chosen present the information to the reader in a clear and concise manner, in both a color printout as well as in black and white copy. Several sets of eyes reviewed each draft iteration of the map. When a final draft was approved we sent it to a local graphics shop for color reproduction."

Anyone can check to see if digital data are available by either reading about it in a press release or at the DMG web site **(http://www.consrv. ca.gov/**). These sources will direct users to an index file at DMG's FTP site.

The DMG FTP files include meta-data—text files describing each data set. The metadata file not only tells a great deal about the data itself, but also gives instructions on how to acquire the file and who to contact if help is needed.

To Order Seismic Hazard Zone Maps

Seismic hazard zone maps for liquefaction and/or landslide potential are available from:

BPS Reprographic Services
149 Second Street
San Francisco, CA 94103
(415) 512-6550

Contact BPS for price information.

Note: The image below is as it appeared in Bulletin #5.
A more up-to-date schedule may be available.

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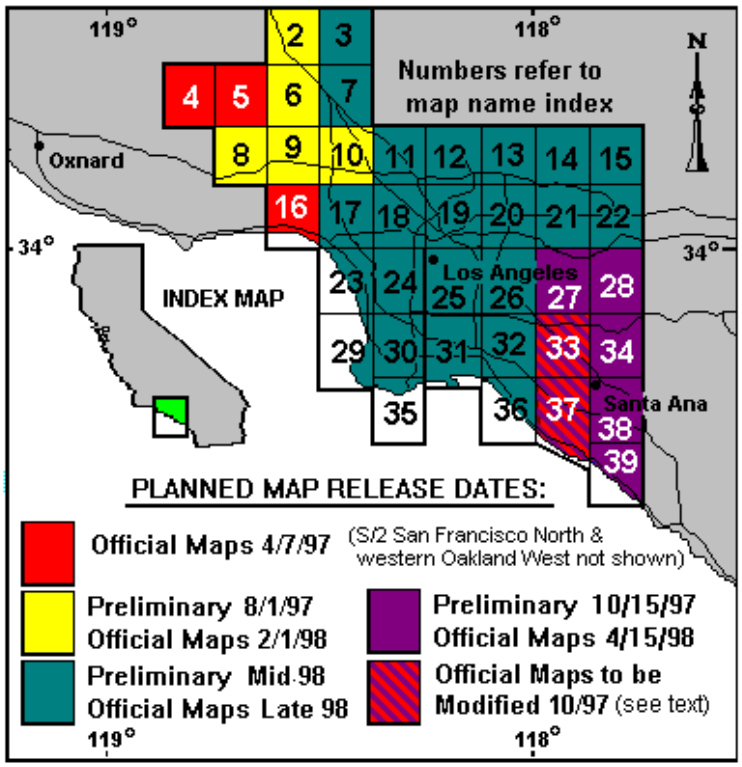
1. San Francisco North and Treasure Island portion of Oakland West
2. Newhall
3. Mint Canyon
4. Simi Valley West
5. Simi Valley East
6. Oat Mountain
7. San Fernando
8. Calabasas
9. Canoga Park
10. Van Nuys
11. Burbank
12. Pasadena
13. Mount Wilson
14. Azusa
15. Glendora
16. Topanga
17. Beverly Hills
18. Hollywood
19. Los Angeles
20. El Monte
21. Baldwin Park
22. San Dimas
23. Venice
24. Inglewood
25. Southgate
26. Whittier
27. La Habra
28. Yorba Linda
29. Redondo Beach
30. Torrance
31. Long Beach
32. Los Alamitos
33. Anaheim
34. Orange
35. San Pedro
36. Seal Beach
37. Newport Beach
38. Tustin
39. Laguna Beach



For More Information...

The **Department of Conservation's Division of Mines and Geology** posts information pertaining to the Seismic Hazard Mapping Program at the Department of Conservation's Web site: **http://www.consrv.ca.gov/.** For information about outreach services available to local governments, contact:

Bea McKamey, Outreach Specialist
Voice: (916) 324-1407
Fax: (916) 445-3334
E-mail: bmckamey@consrv.ca.gov

For assistance with guideline and/or map interpretation, questions or comments about the home page, or availability of data and data services, contact:

Ted Smith, Outreach Coordinator
Voice: (916) 323-8569
Fax: (916) 445-3334
E-mail: tsmith@consrv.ca.gov

For information about the **Fault Evaluation and Zoning Program,** contact:

Bill Bryant, Senior Geologist
Voice: (916) 323-9672
Fax: (916) 445-3334
E-mail: bbryant@consrv.ca.gov